

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-000106**Date Inspected:** 21-Mar-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Liu Liu**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** N/A**Summary of Items Observed:**

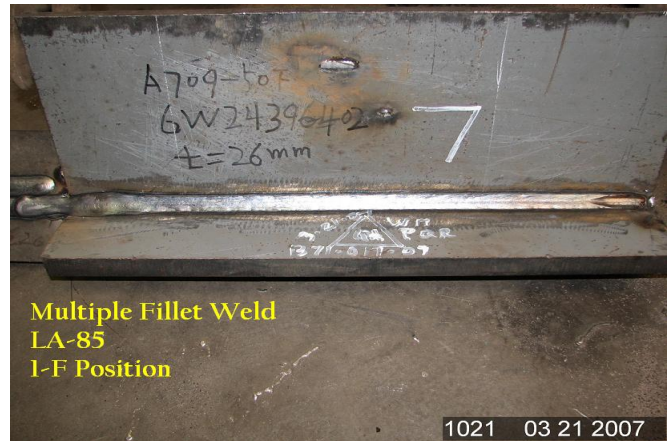
The CALTRANS Quality Assurance (QA) Inspector, Alfredo Acuna was present for the welding qualification testing pertinent for the welding qualification record PQR HP200747 scheduled for this project. ZPMC, welder operator Zhan Xing Jin was observed by the QA Inspector performing welding operations following the preliminary welding procedure specification PWPS-B-T-2121-4 for the PQR identified as HP200747(Fillet welds test). Base metal was designated as A-709-50F-2(Heat # 6W24396402) and appeared to be in general compliance with the mechanical and chemical requirements for fracture critical materials as per contract documents. ZPMC followed AWS 5.13 the production procedure WPS using the automatic submerged arc welding (SAW) process in the flat (1F) position with the 4.8 mm diameter LA-85 Lincoln electrode. The QA Inspector verified amperages, voltages, travel speeds, preheat and heat interpass temperatures. The QA inspectors recorded welding parameters on two sides for a total of 2 passes for multiple weld beads and a single pass on the other side. The QA inspectors observed that the welding parameters taken by ZPMC QA inspector Hu Gang and Liu Liu appeared to be accurate and in a general compliance with the contract documents. The QA inspector performed final visual inspection to the test coupon after completion. The QA inspector observed that welds appeared to be in general compliance with the contract documents. ZPMC QA (CWI) Liu Liu witnessed the testing and performed visual weld inspections. The PQR HP200747 was completed on this date. The QA inspector assigned the lot # B71-016-007 to the single fillet weld and B-71-017-07 for the multiple passes fillet weld.

The QA inspector was present for the welding qualification testing pertinent for the welding qualification record PQR HP200749 scheduled for this project. ZPMC, welding operator Zhan Xing Jin, ZPMC QA inspectors Hu Gang and Liu Liu were observed by the QA Inspector setting up the amperages, voltages and travel speed following the preliminary welding procedure specification PWPS-B-T-2221-F-6 for the PQR identified as HP200749. ZPMC followed AWS 5.13 the production procedure WPS using the automatic submerged arc

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welding (SAW) process in the flat (1G) position with the 4.8 mm diameter EH14 electrode. The QA inspector observed that ZPMC had difficulties setting-up the voltages at 26 V. The voltage was fluctuating between 20 to 30V. Mr. Liu had a conversation with the QA inspector. Mr. Liu relayed to the QA inspector that the PQR HP200749 test was going to be postponed because the voltages selected by the technical department appeared to be too low. In addition, Mr. Liu said that ZPMC was going to research more about the parameters established for this PQR.



Summary of Conversations:

As noted above on paragraph # 2.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By: Acuna, Alfredo

Quality Assurance Inspector

Reviewed By: McClary, David

QA Reviewer